however. Wholegrain bread was produced by nearly a quarter of German bakeries by 1943, compared to only 1% in 1939, following appeals from the health Führer Leonardo Conti that wholegrain bread should be eaten “for the benefit of individual health and longevity.”

The legacy of healthy eating campaigns are even less easy to discern than those of the anti-smoking campaigns. Germany has an overall mortality from smoking which is slightly worse than that of the USA, and it has been suggested that the two countries are related disease.

Fertility
Proctor also comments on our reference to Martin Gumpert, who intimated that the Nazi campaigns to increase fertility were failing. Gumpert managed to escape from Germany before it was too late and did much to advertise the level of misery in Hitler's state. His book Hail Hunger was an attempt to demonstrate that a popular contemporary view—that the Nazis had improved health in Germany—was incorrect. The book was widely quoted outside of Germany and appears to have been an effective intervention. When discussing the fertility campaign Gumpert was referring to the last stage of the battle for births, rather than its early days. As Proctor points out there was an increase in the birth rate and marriage rate immediately following the imposition of the Nazi rule. The birth rate increased from 15.1/1000 in 1932 to 18.9/1000 in 1936.15 But, this should be seen against the decline which preceded it. From a rate of 35.6/1000 in 1900 the fertility rate declined to 31.6/1000 in 1910, 28.8/1000 in 1914, 20.3/1000 in 1928, and 17.5/1000 in 1931, and by the early 1930s it had reached an all-time low.16 Seen in this light the “success” of the pronatalism campaign was modest.17

Interest-free marriage loans were offered from 1933, 1936, and 1941, but with each child, and propaganda intended to encourage working women to return to the home to raise children.18 Increasing legal sanctions against abortion were imposed, culminating in the death penalty being introduced for habitual assistance at abortions.19 In the light of these activities, the last of which would increase the birth rate by fiat rather than winning the propaganda war, the cesarean birth rate of any sustained increase in fertility can be seen as the basis for Gumpert’s consideration that German mothers “had gone on strike.” Gumpert commented cynically on many 1930s’ German political policies. He considered that attempts to claim that poor health was due to bad lifestyle was serving as a smoke screen, to cover up for the genuine decline in health due to the intensification of Nazi policies. Thus he considered the then campaigns to reduce fat consumption during a period of hunger were particularly visionary, stating, “there emerge today health administration’s heryen who proclaim to the public that butter is poison.”

Lack of support
The anti-smoking campaigns in Nazi Germany, extensive as they appear, did not engage the unquestioning support which might have been expected for activities seen to be fully in line with the Führer’s wishes. When the Deutscher Bund Zur Bekämpfung der Tabakgefäenverbreitung, the founder of which received a stream of letters from potential candidates stating that they would not take up the posts. The reasons given included the invited individual admitting to be a “passion smoker.” Even letters from the feared Nazi labour chief, Fritz Sauckel, received the same response. When Karl Astel, rector of Jena University and head of the Institute for the Struggle against the Dangers of Tobacco, attempted to have the bodies of all deceased smokers sent to the Jena Pathology Institute for investigation of the disease that smoking had induced, public opposition required the withdrawal of the program in 1942. The military were also opposed to restrictions on tobacco and this may have led to a lessening of the degree to which anti-smoking legislation was enforced.20

Legacies of Nazism
The legacies of Nazism in contemporary Germany are complex and contradictory.21 A motivated systematic rejection of the Nazi period can be seen in everything from functional architecture, the staid and apolitical nature of universities and television, the desire for press freedom even when it produces the embarrassment that is Hild (Europe’s biggest selling newspaper, which can on occasions make the English Sun read like New Left Review), and consensus Government, through to the more extreme and obvious counter-reaction to the Nazi past by the Baader-Meinhof Group and Red Army Faction,22 or the alternative living situations in squats of many German cities of the Aussenzier and Spontis. Some commentators consider that necessary and useful, as a way to avoid what critics see as the lingering effect of Nazism.23 There are also voices who argue Nazism’s legacies are too deep and last too long, and that we have to change society fundamentally in order to reject Nazi legacies.24

A travel grant from the Wellcome Trust allowed inspection of relevant archives, including those of the Institute for the Struggle against the Dangers of Tobacco. We thank Anne Rennie for help in preparing the manuscript.


7 Geisert M. Heil hunger, starve the Hilter. London: George Allen and Unwin Ltd, 1940.

Estimating life expectancy using an age–cohort model: a critique

Sir—In a recent article published in this journal, Lee and Hsieh1 proposed using the age–cohort model to study Warner and Schillers2 to estimate cohort mortality and cohort life expectancy at birth. They applied it to estimate the cohort life expectancy in Taiwan. The model is a multiplicative Poisson regression model with an intercept term, an age effect term, and a cohort effect term. It does not include an interaction term. As such, the model assumes a constant age pattern of mortality across cohorts.

I have great reservations about this implicit assumption. Child and adult mortality are subject to different factors. On one hand, during the epidemiologic transition, communicable and mortality rates are typically lower than non-communicable diseases. Besides, most public health measures in developing countries after the second world war focused on improving maternal and child health.3 Therefore, mortality generally declined faster than adult mortality. On the other hand, however, we expect that in countries whose mortality level is already low, further mortality declines will be concentrated in older ages because of the law of diminishing marginal returns. So there is no reason to presume a constant age pattern of mortality.

In their study of the incidence of bladder cancer, among men aged 50 years and over, Warner and Schillers2 justified their application of the model graphically by showing that the cohort curves of logistically transformed, age-specific incidence rates were “quasi–parallel” to one another. However, the determinants of a single disease are not as diverse as those of all–cause mortality; the study of adenoma is not as complex as that of atherosclerosis. The quasi–parallel is unlikely to occur in the context of Lee and Hsieh’s application.1

Figure 1 plots some of the data which appears in Lee and Hsieh’s paper. Not surprisingly, for the cohorts born earlier this century, the mortality curves are reasonably parallel in adulthood and old age. The two
Tuberculosis among homeless people at a temporary shelter in London

Sir—Each year the charity Crisis sets up temporary Christmas shelters, not for "the homeless" but for homeless people. Kumar et al. use the former term on 23 occasions in their report of a chest x-ray screening programme.1

Issues of concern were the high prevalence of tuberculosis and suboptimal management of known and presumed cases due to patient "absence",2 which these problems have been previously documented in a very similar group of homeless people in London during the mid 1980s.3

In the earlier survey, there was a notable association between tuberculosis and alcohol (ab)use,2 which may have an impact on treatment compliance. Data from the Crisis Open Christmas4 could perhaps be used to ascertain whether there was an association between "loss to follow up" and accommodation status of "no fixed abode" or self reported "regular alcohol consumption".

The documented health care needs of single, homeless, or homeless and roofless people are multiple.3 Unfortunately, the proposed methodologies are a bit too complex for the present purpose. Instead of re-sorting to models with interaction terms, I feel that a practical solution to this problem may be to perform a "separate analysis".

For example, we can break down the data by age into, say, "childhood", "adulthood", and "elderly" group, each modelled separately, and then the results combined. By this method, different segments of the population assume different cohort trends. Alternatively, we can break down the all-cause data into their component causes, modelled separately and then combined—an approach suggested in our paper.1 Clearly, such an approach pays due respect to the different roles of communicable and the non-communicable diseases during the epidemiologic transition. However, the benefits we gain from these more "sophisticated" approaches must be weighed against what we can infer from "crude" but "simple" age-cohort modelling as shown in our paper.1

Finally, Dr Cheung has stated that the assumption of parallelism is not met in our data after the 1961 cohort. I wish to point out that we also refute the results after 1961, though for a different reason.

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Reply

Dr Cheung points out correctly that the age-cohort model we used to estimate cohort life expectancy in Taiwan has an implicit assumption of constant age pattern across cohorts. Dr Cheung also explains why such an assumption is unlikely to be met, especially in a population under epidemiologic transition. I fully agree with his views.

In the context of age-period-cohort analyses, the problem of non-parallelism in age patterns has been explicitly addressed.23 Unfortunately, the proposed methodologies are a bit too complex for the present purpose. Instead of re-sorting to models with interaction terms, I feel that a practical solution to this problem may be to perform a "separate analysis". For example, we can break down the data by age into, say, "childhood", "adulthood", and "elderly" group, each modelled separately, and then the results combined. By this method, different segments of the population assume different cohort trends. Alternatively, we can break down the all-cause data into their component causes, modelled separately and then combined—an approach suggested in our paper.1 Clearly, such an approach pays due respect to the different roles of communicable and non-communicable diseases during the epidemiologic transition. However, the benefits we gain from these more "sophisticated" approaches must be weighed against what we can infer from "crude" but "simple" age-cohort modelling as shown in our paper.1

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*J Epidemiol Community Health* 1997 51: 210-211
doi: 10.1136/jech.51.2.210

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